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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/605,382 | 09/26/2003 | Gunnar Lagerstrom | 00173.0040.PCUS00 | 2381 |
| 28694 | 7590 | 08/01/2006 | EXAMINER | |
| NOVAK DRUCE & QUIGG, LLP 1300 EYE STREET NW 400 EAST TOWER WASHINGTON, DC 20005 | | | FLANIGAN, ALLEN J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3753 | |

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,382

Applicant(s)

LAGERSTROM ET AL.

Examiner

Allen J. Flanigan

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 13-17 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-16 and 25-31 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulswitt et al. in view of Davison et al.

Please see the comments made in regard to the above rejection in the previous Office action.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hulswitt et al. in view of Davison et al. as applied to claim 1 above, and further in view of Johnson.

Please see the comments made in regard to the above rejection in the previous Office action.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulswitt et al. in view of Davison et al. and Johnson as applied to claim 2 above, and further in view of Prat.

Please see the comments made in regard to the above rejection in the previous Office action.

Applicant's arguments filed 6/13/2006 have been fully considered but they are not persuasive.

An express recognition of equivalence in the prior art is considered to provide a reasonable expectation of success; see ***In re Dillon*, 16 U.S.P.Q. 2d 1897**. It is not necessary for a prima facie finding of obviousness that the prior art expressly suggest such a substitution. See MPEP 2144.06, citing ***In re***

Fout, 213 U.S.P.Q. 532. Both Hulswitt et al. and Davison et al. disclose that the function of their protruberances is

A. to enhance heat transfer efficiency compared to flat plates, and

B. to enhance structural rigidity of the plate pack (see lines 13-22 of column 5 of Hulswitt et al.; lines 43-47 of column 3, lines 13-20 of column 4 of Davison et al.). The “turbulence” effect cited by applicants in analyzing Hulswitt et al. is clearly acknowledged in Davison as well; the corrugations of Fig. 2B of Davison et al. will inherently provide the same effect, providing numerous interruptions of the flow space between adjacent sheets where crossing diagonal ridges intersect to force fluid to flow to one side or the other. The fact that Hulswitt et al. teaches only offset dimples to accomplish these enhancements does not constitute a “teaching away” from the proposed combination, particularly in view of Davison et al.’s express recognition of equivalency. Nor can it be argued that such a modification would render Hulswitt et al. inoperative, as applicants seem to want to do; such would require arguing that Davison et al.’s second embodiment was inoperative.

Applicant seems to desire an express suggestion in one reference to look to the other, or an express suggestion in the art that specific teachings could be combined (page 9 of the response). This sort of standard for obviousness has been soundly rejected by the CAFC (see *In re Nilssen*, 7 U.S.P.Q. 2d at 1502).

Claims 13-16 and 25-31 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Allen J. Flanigan
Primary Examiner
Art Unit 3753

AJF